IN THE CLAIMS

The following listing of the claims replaces all prior versions and listing of the claims in relation to the present patent application.

1. (original) An electrical component system comprising:

an enclosure;

main power conductors disposed in the enclosure;

secondary power conductors disposed in the enclosure;

network data conductors disposed in the enclosure;

a component assembly including a component support and at least one component mounted on the support, the component assembly being engageable in the enclosure;

a main power connector disposed on the support and adapted to complete electrical connection between the component assembly and the main power conductors upon engagement of the component assembly into the enclosure; and

a connector assembly disposed on the component support and adapted to be coupled to the component assembly, the connector assembly being further adapted to complete electrical connection between the component assembly and the secondary power and network data conductors upon engagement of the component assembly in the enclosure.

2. (original) The system of claim 1, wherein the component assembly is positionable in a service position in which the main power connector is electrically disconnected from the main power conductors, and wherein the connector assembly is configured to maintain electrical connection between the component and the secondary power and network data conductors in the service position of the component assembly.

3. (original) The system of claim 2, wherein the component assembly is positionable in the service position by extracting the component assembly partially from the enclosure after engaging the component assembly in the enclosure.

4. (original) The system of claim 1, wherein the connector assembly includes an engageable contact set for maintaining electrical connection with the secondary power and network data conductors.

5. (original) The system of claim 4, wherein the contact set includes a connection to earth ground.

6. (original) The system of claim 1, wherein the connector assembly includes at least one capacitor coupled across the power conductors to limit perturbations of signals through the data conductors.

7. (original) The system of claim 1, wherein the secondary power and network data conductors are provided on an open rail structure supported within the enclosure.

8. (original) The system of claim 7, wherein the data conductors are provided at an innermost cross sectional position on the rail structure and the power conductors are provided at flanking positions with respect to the network data conductors.

9. (original) The system of claim 7, wherein the rail structure includes at least one capacitor coupled across the power conductors.

10. (original) The system of claim 7, wherein the open rail structure includes first and second sets of power conductors providing different levels of power for components mounted on the component support.

11. (original) The system of claim 10, wherein the different power levels include a level of ac power and a level of dc power.

12. (original) The system of claim 10, wherein the rail structure includes at least one first capacitor coupled across the first set of power conductors and at least one second capacitor coupled across the second set of power conductors.

13. (withdrawn) The system of claim 1, comprising a cable system disposed in the enclosure and including a connector configured to mate with the connector assembly to complete electrical connection between the component and the secondary power and network data conductors.

14. (withdrawn) The system of claim 13, wherein the secondary power and network data conductors are disposed in the cable system.

15. (original) The system of claim 14, wherein the connector is disposed on a portion of the enclosure against which the component support bears when engaged in the enclosure.

16. (original) An electrical component system comprising:

an enclosure;

main power conductors disposed in the enclosure;

secondary power conductors disposed in the enclosure;

network data conductors disposed in the enclosure; and

a component assembly including a component support and at least one component mounted on the support, the component assembly being engageable in the enclosure;

wherein the component assembly is positionable in an operational position in which the component assembly is electrically connected to the main power conductors and to the secondary and network data conductors, respectively, and a service position in which the component assembly is electrically disconnected from the main power conductors but remains electrically connected to the secondary power and network data conductors.

17. (original) The system of claim 16, wherein the component assembly is positionable in the service position by extracting the component assembly partially from the enclosure after fully engaging the component assembly in the enclosure.

18. (original) The system of claim 16, wherein the component assembly is positionable in the service position by partial engagement of the component assembly in the enclosure.

19. (original) The system of claim 16, comprising a set of main power connectors disposed on the support and adapted to complete electrical connection between the component and the main power conductors upon engagement of the component assembly into the enclosure.

20. (original) The system of claim 19, comprising a connector assembly disposed on the component support and adapted to be coupled to the component and to the secondary and network data conductors.

21. (original) The system of claim 20, wherein the connector assembly includes a sliding contact set for maintaining electrical connection with the secondary power and network data conductors.

22. (original) The system of claim 20, wherein the connector assembly includes at least one capacitor coupled across the power conductors to limit perturbations of signals through the network data conductors.

23. (original) The system of claim 16, wherein the secondary power and network data conductors are provided on an open rail structure supported within the enclosure.

24. (original) The system of claim 23, wherein the network data conductors are provided at an innermost cross sectional position on the rail structure and the power conductors are provided at flanking positions with respect to the data conductors.

25. (original) The system of claim 23, wherein the rail structure includes at least one capacitor coupled across the power conductors.

26. (original) The system of claim 23, wherein the open rail structure includes first and second sets of power conductors providing different levels of power for components mounted on the component support.

27. (original) The system of claim 26, wherein the different power levels include a level of ac power and a level of dc power.

28. (original) The system of claim 27, wherein the rail structure includes at least one first capacitor coupled across the first set of power conductors and at least one second capacitor coupled across the second set of power conductors.

29. (original) A motor control system, comprising:

an enclosure;

main power conductors disposed in the enclosure;

secondary power conductors disposed in the enclosure;

network data conductors disposed in the enclosure; and

a component assembly including a component support and at least one component mounted on the support, the component assembly being engageable in the enclosure;

wherein the component assembly is selectably positionable between an operational position in which the component assembly is electrically connected to the main power conductors and to the secondary power conductors and the network data conductors, and a service position in which the component assembly is electrically disconnected from the

main power conductors but remains electrically connected to the secondary power conductors and the network data conductors, and a disengaged position wherein the component assembly is disengaged from the main power conductors, the secondary power conductors, and the network data conductors.

30. (original) The system of claim 29, wherein secondary power comprises an ac or dc power.

31. (original) The system of claim 29, wherein a service position comprises a first position in which the component assembly remains at least connected to a first secondary power source.

32. (original) The system of claim 31, wherein a further service position comprises a second position in which the component assembly remains at least connected to a second secondary power source.

33. (original) The system of claim 32, wherein a further service position comprises a third position in which the component assembly remains at least connected to the network data conductors.

34. (original) The system of claim 29, wherein the component assembly, upon placement of the component assembly into the service position from the disengaged position, engages first with a ground conductor.

35. (original) The system of claim 29, wherein the component assembly, upon placement of the component assembly into the service position from the engaged position disengages from the secondary power conductor and the network data conductor prior to disengagement from a ground conductor.

36. (original) A motor control system comprising:

an enclosure;

main power conductors disposed in the enclosure;

secondary power conductors disposed in the enclosure;

tertiary power conductors disposed in the enclosure;

network data conductors disposed in the enclosure; and

a component assembly including a component support and at least one component mounted on the support, the component assembly being engageable in the enclosure;

wherein, the component assembly is positionable in an operational position in which the component assembly is connected to the main power conductors, the secondary power conductors, the tertiary power conductors, and the network data conductors, and a service position in which the component assembly is electrically disconnected from the main power conductors but remains electrically connected to at least one of the secondary power, tertiary power, or network data conductors.

37. (original) The system of claim 36, wherein the component assembly is positioned in the service position by extracting the component assembly partially from the enclosure.

38. (original) The system of claim 36, comprising a set of main power connectors disposed on the support and adapted to complete electrical connection between the component and the main power conductors upon engagement of the component assembly in to the enclosure.

39. (original) The system of claim 38, comprising a connector assembly disposed on the component support and coupleable to the component as well as the secondary, tertiary, and network data conductors.

40. (original) The system of claim 39, wherein the connector assembly includes a sliding contact set for maintaining electrical connection electrical connection with the secondary power, tertiary power, and the network data conductors.

41. (original) The system of claim 39, wherein the connector assembly includes at least one capacitor coupled across power conductors to limit perturbations of signals through the network data conductors.

42. (original) The system of claim 36, wherein the secondary power, tertiary power, and data conductors are provided on an open rail structure supported within the enclosure.

43. (original) The system of claim 42, wherein the network data conductors are provided at an innermost cross sectional position on the rail structure and the power conductors are provided at flanking positions with respect to the data conductors.

44. (original) The system of claim 42, wherein the rail structure includes at least one capacitor coupled across the power conductors.

45. (original) The system of claim 42, wherein the secondary power includes an ac level of power and the tertiary power includes a dc level of power.

46. (original) A method of providing electrical communication in a motor control center, comprising the steps of:

disposing main power conductors, secondary power conductors, and network data conductors within an enclosure;

mounting at least one component on a component support of a component assembly engageable into the enclosure;

communicating between the main power conductors and a set of main power connectors disposed on the support such that the component assembly is engaged with the enclosure; and

electrically coupling a connector assembly disposed on the component support that is coupled to the component assembly and the secondary power and network data conductors such that the component assembly is engaged with the enclosure.

47. (original) The method of claim 46, comprising the step of positioning the component assembly in a service position such that the main power connectors are electrically disconnected from the main power conductors and the secondary power and network data conductors remain electrically coupled to the component assembly.

48. (original) The method of claim 47, wherein positioning comprises extracting the component assembly partially from the enclosure.

49. (original) The method of claim 46, wherein electrically coupling comprises sliding a sliding contact set such that the sliding contact set maintains electrical communication between the secondary power and network data conductors.

50. (original) The method of claim 46, comprising the step of electrically inserting a capacitor across the power conductors to limit perturbations of signals through the data conductors.

51. (original) The method of claim 46, comprising the step of carrying the secondary power and network data conductors on an open rail structure located within the enclosure.

52. (original) The method of 51, comprising the step of electrically inserting a capacitor across the power conductors.

53. (original) The method of claim 52, wherein electrically inserting comprises electrically inserting at least one first capacitor across a first set of secondary power and at least a second capacitor across a second set of secondary power.

54. (original) A method of placing an electrical component system into a test position comprising the steps of:

disposing main power conductors, secondary power conductors, and network data conductors within an enclosure;

mounting at least one component on a component support of a component assembly engageable into the enclosure; and

moving the component assembly from an operational position in which the component assembly is electrically connected to the main power conductors and to the secondary power and network conductors to a service position wherein in which the component assembly is electrically disconnected from the main power conductors but remains electrically connected to the secondary power and network data conductors.

55. (original) The method of claim 54, wherein moving comprises partially extracting the component assembly from the enclosure.

56. (original) The method of claim 54, wherein moving comprises moving a set of main power connectors that are disposed of on the support such that the main power connectors complete electrical connection between the component and the main power conductors from and engaged position to a disengaged position.

57. (original) The method of claim 56, wherein moving comprises moving a connector assembly that is disposed of on the support such that the connector assembly

couples the component to the second power and network data conductors, from the engaged to the disengaged position.

58. (original) The method of claim 57, wherein moving comprises moving a sliding contact on the connector assembly that electrically communicates with the connector assembly and the secondary power and network data conductors from and engaged to a disengaged position.

59. (original) The method of claim 54, comprising the step of electrically inserting a capacitor across the secondary power conductors.

60. (original) The method of claim 54, comprising the step of carrying the secondary power and network data conductors on an open rail structure located within the enclosure.

61. (original) The method of claim 60, comprising the step of electrically inserting a capacitor across the secondary power conductors.

62. (original) The method of claim 61, wherein electrically inserting comprises electrically inserting at least one first capacitor across a first set of secondary power conductors and inserting at least one second capacitor across a second set of secondary power conductors.

63. (original) A method of selectively engaging or disengaging an electrical unit, comprising the steps of:

disposing main power conductors, secondary power conductors comprising ac and dc power conductors, and network data conductors within an enclosure;

mounting at least one component on a component support of a component assembly engageable into the enclosure;

moving the component assembly from a service position in which the component assembly is electrically disconnected from the main power conductors but remains electrically connected to the secondary power conductors and the network data conductors to a disengaged position in which the component assembly is disengaged from the main power conductors, the secondary power conductors and the network data conductors.

64. (original) The method of claim 63, wherein moving comprises disengaging the connector assembly from the secondary power conductor and network data conductor prior to disconnection from a ground conductor.

65. (original) The method of claim 63, wherein moving comprises disengaging the connector assembly from the secondary power conductor prior to disconnection from the network data conductor.

66. (original) A method of placing an electrical unit into a test position comprising the steps of:

disposing main power conductors, secondary power conductors, tertiary power conductors, and network data conductors within a system support;

mounting at least one component on a component support of a component assembly engageable into the system support; and

moving the component assembly from an operational position in which the component assembly is connected to at least the main power, secondary, tertiary, and network data conductors to a service position wherein the component assembly is electrically disconnected from the main power conductor and remains connected to at least one of the secondary, tertiary, or network data conductors.

67. (original) The method of claim 66, wherein moving comprises moving the component assembly to a position such that the component assembly disengages from the secondary power conductor and remains coupled to tertiary and network data conductors.

68. (original) The method of claim 66, wherein moving comprises moving the component assembly to a position such that the component assembly disengages from the secondary and tertiary power conductors and remains coupled to the network data conductors.

69. (original) The method of claim 66, wherein moving comprises moving the component assembly to a position such that the component assembly disengages from the secondary power, tertiary power, and network data conductors and remains coupled to a ground conductor.

70. (original) The method of claim 66, comprising the step of carrying a dc current over the secondary conductor and an ac current over the tertiary conductors.

71. (original) The method of claim 66, comprising the step of carrying an ac current over the secondary conductors and carrying dc current over the tertiary conductors.

72. (original) The method of claim 70, wherein moving comprises moving the component assembly to a position such that the component assembly disengages from the secondary and tertiary power conductors and remains coupled to the network data conductors.

73. (original) The method of claim 71, wherein moving comprises moving the component assembly to a position such that the component assembly disengages from the secondary and tertiary power conductors and remains coupled to the network data conductors.